

# HARDWARE CONSIDERATIONS

SECURE  
COMPUTING

for Sidewinder™ 5 firewall software

## Compaq ProLiant ML370 G2

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This document provides information on specific system hardware required for running Sidewinder firewall software on a Compaq ProLiant ML370 G2. This document is intended for Secure Computing customers who obtain the computer hardware for their firewall software from a supplier other than Secure Computing Corporation.

You should read this document if you are responsible for evaluating, ordering, installing, or configuring system hardware for running Sidewinder firewall software. This document assumes you are familiar with PC hardware component terminology. The detailed set up and configuration guidelines section also assumes you are an experienced computer technician.

**Note:** Use this guide in conjunction with the manufacturer's documentation included with your hardware package.



**Important:** Make sure you read and understand the Known Issues section before purchasing this chassis.

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## Specific hardware supported

This section defines the required and supported hardware components for installing Sidewinder software on a Compaq ProLiant ML370 G2. **ANY SUBSTITUTIONS WILL RESULT IN A CONFIGURATION NOT SUPPORTED BY SECURE COMPUTING.**



**Important:** This hardware configuration is supported for Sidewinder version 5.2.1 or higher.

**Table 1.** SUPPORTED HARDWARE

Hardware item, supplier, and description	Quantity	Supplier Part Number (P/N)
Compaq ProLiant ML370 G2, 1.266 GHz, 256 MB RAM, 3.5" floppy drive, and CD-ROM	1	Compaq 188548-001
Compaq 17" monitor S720	1	Compaq 239286-001
Seagate 20/40 GB 4 mm DAT drive or Compaq 12/24 GB 4 mm DAT drive	1	Seagate STD 2401LW or Compaq 295513-B22
Compaq 18.2 GB disk drive 10,000 RPM or Compaq 18.2 GB disk drive 15,000 RPM	1–4	Compaq 142673-B22 or Compaq 188122-B22
Compaq keyboard	1	Compaq 158649-001
Logitech 3-button mouse	1	Logitech 911455-0403
Optional redundant power supply	1	Compaq 255075-B21
Optional second 1.266 GHz processor	1	Compaq 231117-B21

**Note:** The embedded NIC and dual processors are supported on the Compaq ProLiant ML370 G2.

**Table 2.** PCI SLOTS

PCI Slots	
PCI 64-bit/66 MHz	2
PCI 64-bit/33 Mhz	4

**Table 3. ADDITIONAL NETWORK CARD ADAPTERS AND SCSI RAID CONTROLLERS**

<b>10/100 MB Fast Network Adapters</b>		
PCI - Single Port	3Com	3C905B-TX-NM 3C905B-Combo 3C905CX-TX-NM 3C980C-TXM
	Intel	Pro 100+ Server Adapter, PILA8470B Pro 100S Server Adapter, PILA 8470C3
VPN Accelerator	3Com Typhoon	3CR990SVR95, 10/100 3CR990SVR97, 10/100
PCI - Multiple Port	3Com	3C982-TXM, Dual Port
	Compaq	NC3134 Dual Port 10/100 NIC, PN 138603-B21  NC3135 Dual Port 10/100 upgrade module for NC3134, PN 138604-B21
	Intel	Ether Express Pro 100+ Server Adapter, PILA8472, Dual Port PILA8472C3, Dual Port
	Entrada (Osicom)	FE-2404-TX, Quad Port
<b>Gigabit Network Adapters</b>		
PCI - Fiber	Intel	Intel Pro/1000 Gigabit Server Adapter supports 1000 Base-SX Multi-Mode Fiber PWLA8490SX PWLA8490XF
	Compaq	Compaq NC6134 Gigabit Fiber 174818-B21
PCI - Category 5 Twisted Pair	Intel	Intel Pro/1000 Gigabit Server NIC PWLA8490T PWLA8490XT
	Compaq	Compaq NC7131 Gigabit Server Adapter 158515-B21
<b>RAID Controllers</b>		
PCI	Adaptec	Adaptec 2100S

## Setup and configuration guidelines

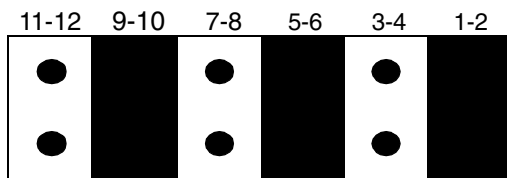
This section defines how to verify that the Compaq ProLiant ML370 G2 hardware settings are correct for a Secure Computing firewall. These instructions supplement the manufacturer's *Users Guide* and *Installation and Troubleshooting Guide*.

1. Remove the top cover.

**Note:** For the following steps, it will be advantageous to consult the Compaq Installation Guide for component locations.

2. Install a network card into any PCI slot.
3. The embedded NIC can be used for a network connection.
4. Locate the DAT drive and verify the model number.
5. Figure 1 and Figure 2 show the jumper and switch settings for the Seagate STD2401LW.

FIGURE 1. DAT DRIVE JUMPER SETTINGS FOR STD2401LW

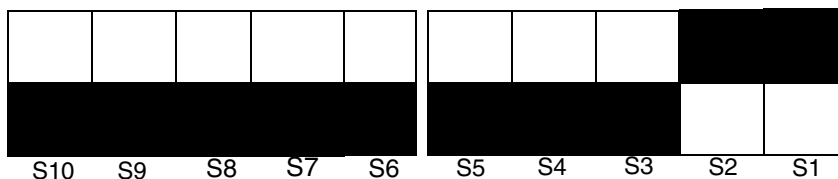


These jumpers are located on the **back** of the DAT drive.

1-2 = SCSI ID 0—jumper installed  
 3-4 = SCSI ID 1—jumper removed  
 5-6 = SCSI ID 2—jumper installed  
 7-8 = SCSI ID 3—jumper removed  
 9-10 = Parity checking—jumper installed  
 11-12 = Terminator Power—jumper removed

**Note:** Jumpers 1–8 are set to specify a SCSI ID of 5.

FIGURE 2. DAT TAPE DRIVE SWITCH SETTINGS FOR STD2401LW



The switch pack is located on the **bottom** of the DAT drive.

S1 = Data compression (off)      S9 = Wide narrow SCSI (on)  
 S2 = SCSI DC control (off)      S10 = Inquiry string support (on)  
 S3 = Media recognition (on)  
 S4 = Self test (on)  
 S5 = Operating system configuration (on)  
 S6 = Operating system configuration (on)  
 S7 = Operating system configuration (on)  
 S8 = Operating system configuration (on)

6. Figure 3 shows the jumper settings for the Compaq 12/24 GB DAT drive.

FIGURE 3. DAT DRIVE JUMPER SETTINGS FOR COMPAQ 12/24 GB 4 MM DAT DRIVE, (PN 295513-B22)

1	2	3	4	5	6	7	8
	●				●	●	●
	●				●	●	●

These jumpers are located on the **back** of the DAT drive.

- 1 = SCSI ID 2—jumper installed
- 2 = SCSI ID 1—jumper removed
- 3 = SCSI ID 0—jumper installed
- 4 = Data compression disabled—jumper installed
- 5 = Parity checking enabled—jumper installed
- 6 = Reserved—jumper removed
- 7 = Termination enabled—jumper removed
- 8 = Terminator power—jumper removed

7. Install the DAT drive into a 5.25" drive bay. Follow the instructions from the *Compaq ProLiant ML370 G2 Setup and Installation Guide*.
8. Connect the SCSI cable to the 4 mm DAT drive.
9. Connect the power cable to the DAT drive.
10. Remove the lowest cover from the Hot Swap Drive Bay.
11. Install the hard drive into the Hot Swap Drive Bay.
12. Re-install the top cover.
13. Connect the keyboard, mouse, and monitor to the Compaq ProLiant ML370 G2. Connect power cords to the monitor and Compaq ProLiant ML370 G2 and plug the power cord into an AC power source.
14. Turn on the power.
15. Press **F9** to enter the ML370 G2 BIOS.

**16.** Verify the following settings:**Table 4.** BIOS SETTINGS

Compaq ML370 G2 BIOS Settings		
<b>System Options</b>	Operating system	Solaris
	Serial Number	xxxx
	Embedded Com Port A	COM 1; IRQ4
	Embedded Com Port B	Disabled
	Embedded LPT Port	LPT 1; IRQ7
	Integrated Diskette Controller	Enabled
	NUMLOCK Power-On State	Off
	Embedded NIC Port 1 PXE Support	Disabled
	Diskette Boot Control	Enabled
	Diskette Write Control	Read and Write
<b>PCI Devices</b>	PCI Embedded Compaq NC3163 10/100 Fast Ethernet NIC Port 1	IRQ: 10
	PCI Embedded Compaq Advanced Server Management ASIC	IRQ: 5
	PCI Embedded PCI USB Controller	Disabled
	PCI Embedded 64-Bit Dual Wide Ultra3 SCSI, Port 1	IRQ: 11
	PCI Embedded 64-Bit Dual Wide Ultra3 SCSI, Port 2	IRQ: 3
	PCI Embedded Compaq PCI Hot-Plug Controller	IRQ: 10
	PCI Slot 6 Ethernet Network Controller	IRQ: 15
<b>Standard Boot Order (IPL) Initial Program Loader</b>	IPL:1	CD-ROM
	IPL:2	Floppy Drive (A:)
	IPL:3	Hard Drive C: (See Boot Controller Order)
<b>Boot Controller Order</b>	Ctrl: 1	PCI Embedded 64-Bit Dual Wide Ultra3 SCSI, Port 2
	Ctrl: 2	Compaq Integrated PCI IDE Controller
	Ctrl: 3	PCI Embedded 64-Bit Dual Wide Ultra3 SCSI, Port 1

**More ...**

Compaq ML370 G2 BIOS Settings		
<b>Date and Time</b>	Verify the date and time are set correctly.	
<b>Automatic Server recovery</b>	ASR Status	Disabled
	ASR Time-out	5 minutes
	Thermal Shutdown	Enabled
<b>Server Passwords</b>	Set Power-On Password	Not required
	Set Admin Password	Not required
	Network Server Mode	Disabled
	QuickLock	Disabled
<b>Advanced Options</b>	MPS Table Mode	Auto Set Table
	Hot Plug Resources	Disabled
	POST Speed Up	Enabled
	POST F1 Prompt	Enabled
	ROM Selection	Use Current ROM
	Erase Non-Volatile Memory	
	Set CPU Corrected	
	Wake-ON LAN	Disabled
	Advanced Memory Protection	Standard ECC Support
	Default Fan Speed	Normal
	NMI Debug Button	Enabled

**17.** Exit and save the BIOS configuration.

**18.** Power down the Compaq ProLiant ML370 G2.

**19.** Ready to install Sidewinder! Please refer to your Sidewinder documentation.

## Known issues

The following are known issues on the Compaq ProLiant ML370 G2:

- If you have a Seagate STD2401LW 4mm DAT drive, you may be able to increase the data transfer rate. To change the drive to synchronous mode and achieve higher data transfer rates, add the following text to */etc/boot.local*:  
`-parm aic0 busted_v3sync=t5`
- To start the second processor add the following text to */etc/mp.config*:  
`extclk`  
 Save the change and then reboot.
- For the Compaq ProLiant ML370 G2 systems that contain a dual port or quad port NIC, note the following:  
 If the network traffic slows or comes to a stop after enabling the second processor, verify the MPS table Mode in the ML370 G2 BIOS is set to `Full Table Mapped`.
- If Sidewinder reports "Unable to find floppy kernel on install media" followed by "fd0: no disk in drive", verify the following:
  - The IDE controller is enabled.
  - The CD-ROM drive is set-up to be the master device, or
  - If the jumper on the CD-ROM is set to CS, verify the middle IDE cable connector is attached to the CD-ROM.
- Sidewinder does not support the Hot Swap feature on the two 64 bit PCI slots.



**Important:** Opening the Hot Swap PCI slot release lever while Sidewinder is running causes a NMI error. NMI: port B(61)=a0<parity\_error. Shutdown and turn the power off on the Compaq ProLiant ML370 G2 before adding/removing a PCI card.

- If the Hot Swap PCI slot release lever is opened with a NIC installed, time-outs will scroll on the screen.

The following hardware is not supported in the Compaq ProLiant ML370 G2:

- The Compaq Smart Array 5i Raid Controller has not been tested on the ML370 G2 at this time.
- The Compaq Smart Array 431, 532, 5302, and 5304 PCI RAID Controllers are not supported.

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